

1           STRUCTURE AND METHOD FOR LOADING ENCRYPTION KEYS  
2                           THROUGH A TEST ACCESS PORT

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7           It is sometimes desirable to encrypt a design for loading into a PLD so that  
8   an attacker may not learn and copy the design as it is being written into the PLD.  
9   It is desirable that decryption keys be stored within the PLD, and that they be  
10   loaded conveniently before a board including the PLD is sold. The invention  
11   allows the PLD to be placed into a printed circuit board and the board to be tested  
12   using a JTAG port of the PLD, and then allows the decryption keys to be loaded  
13   into a key memory using the JTAG port. Loading of the keys can be performed  
14   without also loading of a design into the PLD. Loading may be performed  
15   without the use of a device programmer.